



1651

DOCKET NO.: L0624.70001US00

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Ya Fang Liu  
Serial No: 09/886,964  
Confirmation. No.: 6742  
Filed: June 21, 2002  
For: MLK INHIBITORS FOR TREATMENT OF NEUROLOGICAL  
DISORDERS  
Examiner: Jon P. Weber  
Art Unit: 1651

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**CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)**

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the 8<sup>th</sup> day of April, 2004.

  
Melissa L.B. Lyons

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Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Transmitted herewith are the following documents:

- Copy of Applications 10/042,614 and 10/360,463**
- Information Disclosure Statement**
- PTO Form 1449 with cited references**
- Return Receipt Postcard**

If the enclosed papers are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned at (617) 720-3500, Boston, Massachusetts.

A check is not enclosed. If a fee is required, the Commissioner is hereby authorized to charge Deposit Account No. 23/2825. A duplicate of this sheet is enclosed.

Respectfully submitted,  
*Ya Fang Liu, Applicant*

By: MaryDilys Anderson  
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Docket No. L0624.70001US00  
Date: April 8, 2004  
xNDDx



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*Melissa L.B. Lyons*  
Melissa L.B. Lyons

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**STATEMENT FILED PURSUANT TO THE DUTY OF  
DISCLOSURE UNDER 37 CFR §§1.56, 1.97 AND 1.98**

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, the Applicant requests consideration of this Information Disclosure Statement.

**PART I: Compliance with 37 C.F.R. §1.97**

This Information Disclosure Statement has been filed before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. §1.114.

No fee or certification is required.

**PART II: Information Cited**

The Applicant hereby makes of record in the above-identified application the information listed on the attached form PTO-1449 (modified). The order of presentation of the references should not be construed as an indication of the importance of the references.

The Applicant hereby makes the following additional information of record in the above-identified application.

The applicant would like to bring to the Examiner's attention the following co-pending applications that may contain subject matter related to this application:

<u>Serial No.</u>	<u>Filing Date</u>	<u>Inventor(s)</u>
09/156,367	September 17, 1998	Ya Fang Liu
10/042,614	January 9, 2002	Ya Fang Liu
10/360,463	February 5, 2003	Ya Fang Liu

**PART III: Remarks**

Documents cited anywhere in the Information Disclosure Statement are enclosed unless otherwise indicated. It is respectfully requested that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;
2. The enclosed form PTO-1449 be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application;
3. The citations for the information be printed on any patent which issues from this application.

\* not in file

By submitting this Information Disclosure Statement, the Applicant makes no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

Notwithstanding any statements by the Applicant, the Examiner is urged to form his own conclusion regarding the relevance of the cited information.

An early and favorable action is hereby requested.

Respectfully submitted,  
Ya Fang Liu, *Applicant*

By: MaryDilys S. Anderson  
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Docket No. L0624.70001US00

Date: April 8, 2004

**XNDDX**



FORM PTO-1449/A and B (Modified 10/2000)				APPLICATION NO.: 09/886,964	ATTY. DOCKET NO.: L0624.70001US00
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				FILING DATE: June 21, 2001	CONFIRMATION NO.: 6742
				APPLICANT: Ya Fang Liu	
Sheet	1	of	3	GROUP ART UNIT: 1651	EXAMINER: Jon P. Weber

#### U.S. PATENT DOCUMENTS

Examiner's Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication or of issue of Cited Document MM-DD-YYYY
		Number	Kind Code		
BW*	4,980,281			Gerard M. Housey	12-25-1990
BX*	5,385,915			Joseph D. Buxbaum et al.	01-31-1995
BY*	5,461,146			Michael E. Lewis et al.	10-24-1995
BZ*	5,468,872			Marcie A. Glicksman et al.	11-21-1995
CA*	5,475,110			Robert L. Hudkins et al.	12-12-1995
CB*	5,516,772			Marcie A. Glicksman et al.	05-14-1996
CC*	5,534,426			Michael Karin et al.	07-09-1996
CD*	5,554,523			Usharani Reddy et al.	09-10-1996
CE*	5,591,855			Robert L. Hudkins et al.	01-07-1997
CF*	5,593,884			Michael Karin et al.	01-14-1997
CG*	5,594,009			Robert L. Hudkins et al.	01-14-1997
CH*	5,605,808			Michael Karin et al.	02-25-1997
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CJ*	5,705,511			Robert L. Hudkins et al.	01-06-1998
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CL*	5,756,494			Michael E. Lewis et al.	05-26-1998
CM*	6,127,401			Jasbir Singh et al.	10-03-2000
CN*	6,159,948			George S. Robertson et al.	12-12-2000
CO*	6,514,745	B1		Michael Karin et al.	02-04-2003

#### FOREIGN PATENT DOCUMENTS

Examiner's Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document (not necessary)	Date of Publication of Cited Document MM-DD-YYYY	Translation (Y/N)
		Office/ Country	Number	Kind Code			
CP*	CA	2,148,898			The General Hospital Corporation et al.	05-08-1995	
CQ*	WO	93/15201			New England Deaconess Hospital	08-05-1993	
CR*	WO	94/17498			Enco-Tone Ltd.	08-04-1994	
CS*	WO	95/03324			The Regents of the University of California	02-02-1995	
CT*	WO	95/23849			The Children's Hospital of Philadelphia	09-08-1995	
CU*	WO	99/58982			Ya Fang Liu	11-18-1999	
CV*	WO	00/13015			Cephalon, Inc.	03-09-2000	
CW*	WO	00/47583			Cephalon, Inc.	08-17-2000	
CX*	WO	02/14536			Cephalon, Inc.	02-21-2002	

**OTHER ART – NON PATENT LITERATURE DOCUMENTS**

Examiner's Initials	Cite No	Include name of the author (in CAPITAL LETTERS) title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, relevant page(s), volume-issue number(s), publisher, city and/or country where published.	Translation (Y/N)
	<b>CY*</b>	Angeles, T. et al., Enzyme-linked Immunosorbent Assay for trkA Tyrosine Kinase Activity. <i>Analytical Biochemistry</i> , 236: 49-55, 1996.	
	<b>CZ*</b>	Bergeron et al., Inhibition of Cell Growth by Overexpression of the ZPK Gene. <i>Biochemical and Biophysical Research Communications</i> , 231:153-155, 1997.	
	<b>DA*</b>	Blouin et al., Cell-Specific Expression of the ZPK Gene in Adult Mouse Tissues. <i>DNA and Cell Biology</i> , 15: 631-642, 1996.	
	<b>DB*</b>	Davis, R.J., Human JNK3 Alpha 2 Protein Kinase (JNK3A2) mRNA. GenBank Accession No. U34819, July 25, 1996.	
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	<b>DD*</b>	DeAizpurua et al., Expression of Mixed Lineage Kinase-1 in Pancreatic $\beta$ -Cell Lines at Different Stages of Maturation and During Embryonic Pancreas Development. <i>The Journal of Biological Chemistry</i> , 272:16364-16373, 1997.	
	<b>DE*</b>	Diener et al., Activation of the c-Jun N-terminal kinase pathway by a novel protein kinase related to human germinal center kinase. <i>Proc. Natl. Acad. Sci. USA</i> , 94: 9687-9692, 1997.	
	<b>DF*</b>	Dorow et al., Identification of a new family of human epithelial protein kinases containing two leucine/soleucine-zipper domains. <i>Eur. J. Biochem</i> , 213:701-710, 1993.	
	<b>DG*</b>	Ezoe et al., PTK1, a novel protein kinase required for proliferation of human melanocytes. <i>Oncogene</i> , 9:935-938, 1994.	
	<b>DH*</b>	Fan et al., Dual Leucine Zipper-bearing Kinase (DLK) Activates p46SAPK and p38mapk but not ERK2. <i>Journal of Biological Chemistry</i> , 271:24788-24793, 1996.	
	<b>DI*</b>	Fanger, G.R. et al., MEKKs, GCKs, MLKs, PAKs, TAKs, and tpls: Upstream Regulators of the c-Jun Amino-Terminal Kinases? <i>Current Opinion in Genetics and Development</i> , 7:67-74, 1997.	
	<b>DJ*</b>	Glicksman et al., CEP-1347/KT7515 Prevents Motor Neuronal Programmed Cell Death and Injury-Induced Dedifferentiation In Vivo. <i>Journal of Neurobiology</i> . 34: 361-370, 1998.	
	<b>DK*</b>	Glicksman et al., K-252a and Staurosporine promote Choline Acetyltransferase Activity in Rat Spinal Cord Cultures. <i>Journal of Neurochemistry</i> , 61:210-221, 1993.	
	<b>DL*</b>	Hambleton et al., Activation of c-Jun N-terminal kinase in bacterial lipopolysaccharide-stimulated macrophages. <i>Proc. Natl. Acad. Sci. USA</i> , 93: 2774-2778, 1996.	
	<b>DM*</b>	Hirai et al., Activation of the JNK pathway by distantly related protein kinases, MEKK and MUK. <i>Oncogene</i> , 12: 641-650, 1996.	
	<b>DN*</b>	Holzman et al., Identification, Molecular Cloning, and Characterization of Dual Leucine Zipper Bearing Kinase. <i>Journal of Biological Chemistry</i> , 269: 30808-30817, 1994.	
	<b>DO*</b>	Hu et al., Human HPK1, a novel human hematopoietic progenitor kinase that activates the NJK/SAPK kinase cascade. <i>Genes and Development</i> , 10: 2251-2264, 1996.	
	<b>DP*</b>	Ing et al., MLK-3: identification of a widely-expressed protein kinase bearing an SH3 domain and a leucine zipper-basic region domain. <i>Oncogene</i> , 9:1745-1750, 1994.	
	<b>DQ*</b>	Kaneko et al., Neurotrophic 3, 9-bis (alkylthio)methyl - and - bis(alkoxymethyl) -K- 252a Derivatives. <i>J. Med. Chem.</i> 40: 1863-1869, 1997.	
	<b>DR*</b>	Katoh et al., Cloning and Characterization of MST, a novel (putative) serine/threonine kinase with SH3 domain. <i>Oncogene</i> , 10: 1447-1451, 1995.	
	<b>DS*</b>	Kiefer et al., HPK1, a hematopoietic protein kinase activating the SAPK/JNK pathway. <i>EMBO Journal</i> , 15: 7013-7025, 1996.	
	<b>DT*</b>	Knight, E. et al., A Radioactive Binding Assay for Inhibitors of trkA Kinase. <i>Analytical Biochemistry</i> , 247: 376-381, 1997.	
	<b>DU</b>	Leppa et al., Differential regulation of c-Jun by ERK and JNK during PC12 cell differentiation. <i>The EMBO Journal</i> , 17(15): 4404-4413, 1998.	
	<b>DV</b>	Leppa et al., Diverse functions of JNK signaling and c-Jun in stress response and apoptosis. <i>Oncogene</i> , 18:6158-6162, 1999.	
	<b>DW*</b>	Maroney et al., Motoneuron Apoptosis is blocked by CEP-1347 (KT 7515), a Novel Inhibitor of the JNK Signaling Pathway. <i>Journal of Neuroscience</i> . 18(1): 104-111, 1998.	
	<b>DX*</b>	Mata et al., Characterization of Dual Leucine Zipper-bearing Kinase, a Mixed Lineage Kinase Present in Synaptic Terminals whose Phosphorylation State is Regulated by Membrane Depolarization via Calcineurin. <i>Journal of Biological Chemistry</i> , 271: 16888-16896, 1996.	

	<b>DY*</b>	Nagata et al., The MAP kinase kinase kinase MLK2 co-localizes with activated JNK along microtubules and associators with kinesin superfamily motor KIF3. EMBO Journal, 17: 149-158, 1998.		
	<b>DZ*</b>	Park et al., Ordering the Cell Death Pathway. J. Biol. Chem. 271(36): 21896-21905, 1996.		
	<b>EA*</b>	Phelps et al., Generation Patterns of Four Groups of Cholinergic Neurons in Rat Cervical Spinal Cord: A Combined Tritiated Thymidine Autoradiographic and Choline Acetyltransferase Immunocytochemical Study. Journal of Comparative Neurology, 273: 459-472, 1998.		
	<b>EB*</b>	Pombo et al., Activation of the SAPK pathway by the human STE20 homologue germinal centre kinase. Nature, 377: 750-754, 1995.		
	<b>EC*</b>	Qin et al., Nuclear Factor- $\kappa$ B Contributes to Excitotoxin-Induced Apoptosis in Rat Striatum. Molecular Pharmacology, 53: 33-42, 1998.		
	<b>ED*</b>	Reddy et al., Cloning of a Novel Putative Protein Kinase Having a Leucine Zipper Domain From Human Brain. Biochemical and Biophysical Research Communication, 202: 613-620, 1994.		
	<b>EE*</b>	Sakuma et al., Molecular Cloning and Functional Expression of a cDNA Encoding a New Member of Mixed Lineage Protein Kinase from Human Brain. Journal of Biological Chemistry, 272: 28622-28629, 1997.		
	<b>EF*</b>	Sells et al., Emerging from the Pak: the p21-activated protein kinase family. Trends in Cell Biology, 7: 162-167, 1997.		
	<b>EG*</b>	Smith et al., Trophic Effects of Skeletal Muscle Extracts on Ventral Spinal Cord Neurons in Vitro: Separation of a Protein with Morphologic Activity from Proteins with Cholinergic Activity. Journal of Cell Biology, 101: 1608-1621, 1995.		
	<b>EH*</b>	Su et al., NIK is a new Ste20-related kinase that binds NCK and MEKK1 and activates the SAPK/JNK cascade via a conserved regulatory domain. The EMBO Journal, 16: 1279-1290, 1997.		
	<b>EI*</b>	Tung et al., A novel human SPS1/STE20 homologue, KHS, activates Jun N-terminal kinase. Oncogene, 14:653-659, 1997.		

EXAMINER	DATE CONSIDERED

#EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

\*a copy of this reference is not provided as it was previously cited by or submitted to the office in a prior application, Serial No. 09/156,367 , filed September 17, 1998 , and relied upon for an earlier filing date under 35 U.S.C. 120 (continuation, continuation-in-part, and divisional applications).

[NOTE - Must provide a copy of any patent, publication, other information listed, even if it was previously submitted to, or cited by, the U.S. Patent Office in an earlier application, unless the earlier application is identified by the IDS and is relied upon for an earlier filing date under 35 U.S.C. §120, and the copy was provided in the earlier application.]